

Appl. No. 10/748,549
Amdt. Dated April 14, 2006
Reply to Office Action of February 17, 2006

Docket No. AS00007
Customer No. 22917

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (currently amended) A method of classifying an activity state of a driver comprising:
 - providing an at least two-state activity classifier;
 - receiving sensor data relating to at least one vehicle operating condition;
 - classifying the driver activity using one of a linear function of the sensor data, a non-linear function of the sensor data, and a statistical classifier into one of at least two states based upon the sensor data, a first of the at least two states corresponding to a maneuver activity and a second of the at least two states corresponding to a non-maneuver activity; and
 - utilizing the classified state of the at least two states to determine whether to send an event to the driver-is-capable of receiving an event in the vehicle.
2. (original) The method of claim 1 wherein the classifying the driver activity into the first of the at least two states corresponding to the maneuver activity further comprises:
 - classifying the state of the driver activity as maneuver when engaged in an activity corresponding to one of a change in the position of a vehicle with respect to one or more vehicles or stationary objects, a parking maneuver, a freeway ingress, a freeway egress, a communication with an external party, an interaction with another occupant and a state of an entertainment device.
3. (original) The method of claim 1 wherein the classifying the driver activity into the second of the at least two states corresponding to the non-maneuver activity further comprises:
 - classifying the state of the driver activity as non-maneuver when disengaged from an activity corresponding to one of a change in the position of a vehicle with respect to a one or more vehicles or stationary objects, a parking maneuver, a freeway ingress, a freeway egress, a communication with an external party, an interaction with another occupant, and a state of an entertainment device.

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4. (original) The method of claim 1 further comprising:

receiving a second sensor data relating to at least one of a condition of the driver, a condition of a passenger compartment, and a condition of a passenger.

5. (original) The method of claim 1 wherein classifying the driver activity further comprises analyzing a position and a rate of change of the position of one of an accelerator, a brake, a steering device, a turn signal selector, a clutch and a gear selector.

6. (original) The method of claim 1 wherein the classifying the driver activity state further comprises classifying the driver activity state using one of instantaneous sensor data and prior sensor data.

7. (cancelled)

8. (cancelled)

9. (currently amended) The method of claim 8 wherein the classifying the driver activity using the statistical classifier further comprises using a C4.5, a RIPPER and a Quadratic classifier.

10. (previously presented) The method of claim 1 further comprising:

altering presentation of an event in the vehicle when classifying the activity state of the driver is maneuver.

11. (previously presented) The method of claim 1 wherein the event is one of a wireless communication, a vehicle condition alert, a navigation instruction, an email message, and an entertainment presentation.

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12. (currently amended) A two-state classification apparatus for classifying an activity state of a driver comprising:

an input for receiving sensor data relating to at least one vehicle condition; and
a processor coupled to the input, wherein the processor analyzes the sensor data to determine a classification of the activity state of the driver using a statistical classifier into one of a maneuver and non-maneuver and utilizes the classification of the activity state to determine whether to send an event to the driver ~~is capable of receiving an event in~~ the vehicle.

13. (original) The classification apparatus of claim 12 further comprising an output for conveying a signal relating to the classification of the activity state of the driver.

14. (cancelled)

15. (currently amended) The classification apparatus of claim ~~14~~12 wherein the statistical classifier is one of a C4.5, a RIPPER and a Quadratic classifier.

16. (original) The classification apparatus of claim 12 wherein the classification of non-maneuver enables an event in the vehicle.

17. (original) The classification apparatus of claim 12 wherein the classification of maneuver delays an event in the vehicle.

18. (original) The classification apparatus of claim 17 wherein the event is a notification of a change in state of an other apparatus in the vehicle.

19. (original) The classification apparatus of claim 12 wherein the sensor data corresponds to one of an instrumentation data, a vehicle control data, a driver condition data, and a driver activity data.

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20. (original) The classification apparatus of claim 12 wherein the processor analyzes the sensor data corresponding to a driver identification.

21. (original) The classification apparatus of claim 12 wherein the at least one vehicle condition is one of a vehicle mechanical condition, a vehicle passenger compartment condition, a driver state and a passenger state.

22. (original) The classification apparatus of claim 12 wherein the at least one vehicle condition is one of an accelerator pedal position, a brake pedal position, a vehicle speed, a turn signal state, and a steering wheel position.

23. (original) The classification apparatus of claim 12 wherein the classification corresponds to a current condition of the sensor data.

24. (original) The classification apparatus of claim 12 wherein the classification corresponds to a past condition of the sensor data.

25. (currently amended) A vehicle arranged and constructed to use a classification of an activity state of a driver comprising:

a classification apparatus using a statistical classifier for providing a signal corresponding to one of maneuver and non-maneuver, the signal based on a sensor data related to at least one operational condition; and

a device operable to use the signal for determining a timing for sending the driver an event.

26. (original) The vehicle of claim 25 wherein when the signal corresponds to non-maneuver and the timing is immediate for notifying the driver of the event.

27. (original) The vehicle of claim 25 wherein when the signal corresponds to maneuver and the timing is delayed for notifying the driver of the event.

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28. (original) The vehicle of claim 25 wherein the device is a wireless communication device.

29. (original) The vehicle of claim 25 wherein the operational condition is one of a instrumentation condition, a vehicle control condition, an entertainment device condition, a driver condition, and a driver activity condition.